

Notice of Intent to Issue a Funding Opportunity Announcement

The Department of Energy's (DOE) National Energy Technology Laboratory (NETL) intends to issue, on behalf of the Office of Energy and Efficiency and Renewable Energy (EERE) FreedomCAR and Vehicle Technologies (FCTV) Program, a Funding Opportunity Announcement entitled "Development of Power Electronics and Electric Motor Technology for Plug-In Hybrid Electric Vehicles (PHEV), Internal Combustion Engine Hybrid Electric Vehicles (HEV), and Fuel Cell Vehicle (FCV) Traction Drive Applications."

Mass market acceptance of advanced hybrid electric vehicles including plug-in HEV, internal combustion engine HEV, and fuel cell vehicles depends on achieving significantly reduced cost, weight, and volume electric propulsion systems. Electric propulsion systems currently available in the market cost about \$33/kW. The objective of this Funding Opportunity Announcement is to develop technologies compatible with the high-volume manufacturing of PEEM technologies that will enable achievement by 2015 of an electric propulsion system with a 15-year life capable of delivering at least 55 kW for 18 seconds and at least 30 kW continuous at a system cost of \$12/kW peak with an inlet coolant temperature of 105°C. A 2020 follow-on technical objective is to reduce the production cost of automotive electric propulsion systems by a factor of four from today's cost, together with a size reduction of over 50%.

The projects will be carried out in Phases:

- Phase I will consist of design, modeling, and initial research and development (R&D). The period of performance will be 9 to 12 months. At the conclusion of Phase I an evaluation of the concept will be performed by DOE and a go/no-go decision will be made whether to conclude the project, or to proceed to Phase II.
- Phase II, if approved, will consist of R&D for the purpose of achieving and demonstrating project technical targets. The phase will include device performance testing to confirm performance parameters and technical targets. Phase II will also include device fabrication and testing at the offeror's facility and delivery of device hardware for confirmatory testing and analysis at national laboratory facilities. It is estimated that Phase II will be 24 to 36 months duration.

Proposals for project awards must apply under the following Areas of Interest: 1. High temperature inverter for PHEV, HEV, and FCV traction drive applications, 2. High speed motors for PHEV, HEV, and FCV traction drive applications, 3. Integrated traction drive system for PHEV, HEV, and FCV traction drive applications, and 4. Bidirectional DC/DC converter for PHEV traction drive applications.

DOE envisions awarding multiple financial assistance agreements. The costs per contract is anticipated at \$3MIL -5 MIL per award (depending of the number of awards) which includes a minimum cost share of 20% Phase I and a 50% cost share for Phase II. Anticipated federal funding is \$2 MIL for Fiscal Year 07, and is subject to availability of funds. DOE reserves the right to make no awards in an Area of Interest.

National Laboratories will not be permitted to participate as the Prime Recipient in response to this Funding Opportunity Announcement. National Laboratories will be allowed to participate as subcontractors in a limited capacity. All cost share must be from non-Federal sources and is based on the percentage of total allowable cost for the proposed project. The total allowable cost of the project is the sum of the Government share, the National Lab costs (if applicable), and the recipient's share of allowable cost.

DOE plans to make the Funding Opportunity Announcement available in or around September, 2006. The Funding Opportunity Announcement will be available for viewing at Grants.gov (<http://www.grants.gov>) and at the DOE's Industry Interactive Procurement Systems (IIPS) or "e-center" (<https://e-center.doe.gov>). Applicants are encouraged to register at these sites to receive notification of announcements posted by the National Energy Technology Laboratory. When the Funding Opportunity Announcement is released, applications will only be received through Grants.gov.

DOE will not entertain questions at this time. Once the Funding Opportunity Announcement has been released, a "submit questions" feature will be defined.

DISCLAIMER

This Notice is issued so that interested parties are aware of DOE's intention to issue this Funding Opportunity Announcement. Any of the information contained in this Notice is subject to change depending on the needs of the Office of Energy Efficiency and Renewable Energy (EERE) Office of FreedomCAR and Vehicle Technologies (FCVT) Program and the availability of funding.